

10/518698
DT01 Rec'd PCT/PT 20 DEC 2004

U.S. Application No.: NEW
PRELIMINARY AMENDMENT

Attorney Docket: 3926.125

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-6 (cancelled)

7. (New) A particle for producing a three-dimensional object by means of layer-building processes, comprising

- a core,
- a first coating on the core, and
- a second coating on the first coating

wherein the first coating is a material different from said core, the first coating is polar, and the thickness of the first coating corresponds to 0.1 to 10% of the mean particle radius, and

wherein the second coating is formed from surfactant, the thickness of which corresponds to a monolayer of the surfactant.

8. (New) The particle as claimed in claim 7, wherein the first coating and the second coating are soluble in water or an aqueous solution but the core is not.

9. (New) A process for producing a three-dimensional object, including the following steps:

- applying a layer of particles to a target surface,

- irradiating a selected part of the layer, corresponding to a cross-section of the object, with an energy beam, so that the particles are joined in the selected part,
- repeating the application and irradiation steps for a plurality of layers, so that the joined parts of the adjacent layers are joined together in order to form the object,
wherein
- the particles are particles to whose outer surface a surfactant has been applied.

10. (New) The process as claimed in claim 9, wherein the particle for producing a three-dimensional object by means of layer-building processes comprises:

- a core,
- a first coating on the core, and
- a second coating on the first coating
wherein the first coating is a material different from said core, the first coating is polar, and the thickness of the first coating corresponds to 0.1 to 10% of the mean particle radius, and
wherein the second coating is formed from surfactant, the thickness of which corresponds to a monolayer of the surfactant.

11. (New) A process for producing a three-dimensional object, including the following steps:

- applying a layer of particles to a target surface,

- printing a liquid in which at least parts of the particles are soluble onto a selected part of the layer, corresponding to a cross-section of the object, so that the particles are joined in the selected part,
- repeating the application and printing steps to form a plurality of layers, so that the joined parts of the adjacent layers are joined together in order to form the object,
wherein
- the particles are particles to whose outer surface a surfactant has been applied.

12. (New) The process as claimed in claim 11, wherein the particle for producing a three-dimensional object by means of layer-building processes comprises:

- a core,
- a first coating on the core, and
- a second coating on the first coating

wherein the first coating is a material different from said core, the first coating is polar, and the thickness of the first coating corresponds to 0.1 to 10% of the mean particle radius, and

wherein the second coating is formed from surfactant, the thickness of which corresponds to a monolayer of the surfactant.

13. (New) An object formed from particles joined together by a layer-building processes, wherein the particles comprise

- a core,

- a first coating on the core, and

- a second coating on the first coating

wherein the first coating is a material different from said core, the first coating is polar, and the thickness of the first coating corresponds to 0.1 to 10% of the mean particle radius, and

wherein the second coating is formed from surfactant, the thickness of which corresponds to a monolayer of the surfactant.

14. (New) A three-dimensional object formed from particles joined together by a layer-building processes including the following steps:

- applying a layer of particles to a target surface,

- irradiating a selected part of the layer, corresponding to a cross-section of the object, with an energy beam, so that the particles are joined in the selected part,

- repeating the application and irradiation steps to form a plurality of layers, so that the joined parts of the adjacent layers are joined together in order to form the object,

wherein

- the particles are particles to whose outer surface a surfactant has been applied.